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Zhodnocení finanční situace společnosti Walton Advanced Engineering Inc.

Financial Situation Assessment of Walton Advanced Engineering Inc. Company

Student: Zihan Zhang

Supervisor of the bachelor thesis: doc. Ing. Miroslav Čulík, Ph.D.

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3. Characteristics of Walton Advanced Engineering Inc. Company
4. Financial Situation Assessment of Walton Advanced Engineering Inc. Company
5. Conclusion

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Ing. Iveta Ratmanová, Ph.D.
Head of Department

prof. Dr. Ing. Zdeněk Zmeškal
Dean

The declaration

"Herewith I declare that I elaborated the entire thesis, including all annexes independently."

Ostrava dated 29. 04. 2019

张紫涵 Zihan Zhang.

Zihan Zhang

Content

1 Introduction

The objective of the work is about to analysis the financial situation of Walton Advanced Engineering，a company in Taiwan province，China.

Financial analysis is a process of selecting, evaluation and interpreting financial data. It is an aspect of the overall business finance function that involves examining historical data to gain information about the current and future financial health of a company. Financial analysis can be applied in a wide variety of situations to give business managers the information they need to make critical decisions. Among the skills required to understand and manage a business is fluency in the language of finance—the ability to read and understand financial data as well as present information in the form of financial reports.

Thesis is divided into five parts.

Chapter 2 is a five-part analysis of financial data from Walton Advanced Engineering over the last five years, from 2013 to 2017. The First Section describes three basic financial statements, including balance sheet, income statement (profit / loss statement), and cash flow. All subsequent analysis of the data is based on data from these three financial statements, so this section is important. Then we can compare and calculate these data using common-size analysis. We will describe financial analysis which contains four kinds of activities, they are: Profitability Ratios, Liquidity Ratios, liquidity (leverage) ratios, and activity ratios. In the fourth part we will do pyramidal decomposition. The final section will cover topics related to sensitivity analysis.

In Chapter 3, we'll cover some basic information about Walton Advanced Engineering. In fact, it's not a very well-known company. And because of the special nature of Taiwan to China, the laws Taiwanese companies follow are slightly different from those of the mainland. In doing data analysis, the impact of the external

environment for the company is also a point that cannot be ignored.

In Chapter 4, the methods of Chapter 2 will be used to calculate and analyze Walton Advanced Engineering's financial situation. And this part is the most important among whole thesis. Because in this chapter, we directly analyze the competitiveness of a company in the market by calculating the value of financial ratios. And we will also use pyramidal decomposition to conduct further analysis of Walton Advanced Engineering's return on equity by decomposing this ratio. Finally, we use sensitivity analysis to predict the effect of basic ratios on ROE

In Chapter 5, we will make a conclusion based on the previous results and data.

2 Description of Financial Analysis Methodology

In this chapter, we will describe financial analysis methodology that will be used in flowing chapters. We divided this chapter into three parts. First, we will introduce the three main statement, balance sheet, cash flow statement, and income statement. The next parts, we will explain common-size analysis, it includes vertical common-size analysis and horizontal common-size analysis. Third, we will introduce financial ratio analysis，Pyramidal decomposition and sensitivity analysis.

2.1 Financial statement

In this part, we will introduce three financial statements that reflect the company's financial information, namely the balance sheet, income statement and cash flow statement. All three financial statements are structured statements showing changes in information about assets or liabilities arising from the company's financial activities. This information is useful for users or investors to make decisions.

We will use these three financial statements in all subsequent analyses. Basically all of the company's financial aspects are derived from these tables. Of course, the possibility of corporate statements being falsified is not ruled out, but in the basic analysis, we assume that these companies are honest.

2.1.1 Balance sheet

A balance sheet is a summary of the financial balance of an individual or organization at a particular point in time. There are two aspects in total, one is assets and financing, and the other is debt and owner's equity. The relationship between these two parts can be expressed by the equation as follows:

$$\mathrm{A} = \mathrm{E} + \text{liability} \tag{2.1}$$

The left side is the asset side, listing the closing amount of company’s current

assets, fixed assets, intangible and deferred assets, and so on.

The right side is the liability and owner's equity, and shows the closing amount of each item of the company's current liabilities, long-term liabilities, owner's equity, etc. The two sides of the table have the same total count.

Table 2.1 shows the balance sheet in small business company.

Table 2.1 Balance sheet

Assets (current)		**Liabilities and Owners' Equity**		
Cash	$6,600	**Liabilities**		
Accounts Receivable	$6,200	Notes Payable	$5,000	
Assets (non-current)		Accounts Payable	$25,000	
Tools and equipment	$25,000	*Total liabilities*		$30,000
		Owners' equity		
		Capital Stock	$7,000	
		Retained Earnings	$800	
		Total owners' equity		$7,800
Total	$37,800	*Total*		$37,800

Source：https://en.m.wikipedia.org/wiki/Balance_sheet

In this table we can see that the entire company's financial projects are roughly divided into three categories, and there are many small projects under each category. But no matter how it is classified, in general, this table must conform to formula (2.1).

2.1.2 Income statement

The income statement is also one of the financial statements that reflect the company's financial performance in a particular accounting period. Although the balance sheet can reflect the financial status of the company at a single point in time, the income statement is more reflective of a company's income and expenditure for a

certain period of time.

To be precise, the income statement is a process that reflects how the company converts revenue into profit. That is the process of converting income into net income. Therefore, the income statement should include both income and expenditure. Revenue includes operating income, non-operating income and income, and expenditure should include both cost and loss.

The basic equation underlying the income statement is:

$$\text{EAT} = \text{revenues} + \text{gains} - \text{costs(expences)} - \text{tax} \quad (2.2)$$

Different countries have different names for the above classifications in different regions. But all in all, all companies are trying to get the company's net income in the income statement. In general, no matter how many subdivided income items or expenditure items are in the middle, the result is to get the result on the left side of equation (2.2).

The table 2.2 shows the income statement for a quarter. Of course, quarterly earnings statements follow the same principles as annual earnings statements, and the items that make up the statements are the same.

Table 2.2 Income statement for a quarter

Excel Sports Income Statement			
For the quarter ended 30 September 2018			
Revenue			
	Merchandise Sale	25,800	
	Revenue from Training	5,000	
	Total Revenue		**30,800**
Expenses			
	Procurement Costs	8,000	
	Wages	700	
	Rent	1,000	
	Interest Paid	500	
	Transportation	300	
	Utilities	150	
	Total Expenses		**10,650**
Gains			
	Income from sale of van	2,000	
			2,000
Losses			
	Settlment cost of consumer lawsuit	800	
			800
Net Income	(Revenue + Gains) – (Expenses + Losses)		**21,350**

Source: https://www.investopedia.com/terms/i/incomestatement

The income statement is a period of time after a period of time to show the company's funds during this time. On the whole, it is to show the process of performance in formula (2.2), and finally to show the public's profit (or loss) to the public and financial institutions.

2.1.3 Cash flows statement

In financial accounting, a cash flow statement, also known as a cash flow statement, is a financial statement that shows how changes in balance sheet accounts and income affect cash and cash equivalents and breaks down the analysis into operations, investments, and financing activities.

The table 2.3 shows three parts in cash flows statement，the operating activities，the investing activities and the financing activities.

Table 2.3 Cash flows statement

Cash flows from (used in) operating activities		
Cash receipts from customers	9,500	
Cash paid to suppliers and employees	(2,000)	
Cash generated from operations (**sum**)	**7,500**	
Interest paid	(2,000)	
Income taxes paid	(3,000)	
Net cash flows from operating activities		2,500
Cash flows from (used in) investing activities		
Proceeds from the sale of equipment	7,500	
Dividends received	3,000	
Net cash flows from investing activities		10,500
Cash flows from (used in) financing activities		
Dividends paid	(2,500)	
Net cash flows used in financing activities		(2,500)
.		
Net increase in cash and cash equivalents		10,500
Cash and cash equivalents, beginning of year		1,000
Cash and cash equivalents, end of year		$11,500

Source：https://en.wikipedia.org/wiki/Cash_flow_statement

In the process, we can see that there are both inflows and outflows in the entire cash flow statement. And the cash flow statement is not classified according to income or expenditure as the income statement and the cash flow statement is classified according to different financial activities.

In general, we believe that a company should have three different financial activities that generate cash flow. They are business activities, investment activities and financing activities. We make the following definitions for them:

1. Business activities: Business activities include the production, sale and delivery of company products and payment from customers. This may include buying raw materials, building inventory, advertising and shipping products.

2. Investment activities: Investment activities include buying or selling assets, providing loans to suppliers, etc.

3. Financing activities: Financing activities include cash inflows from investors such as banks and shareholders, and cash dividends to shareholders as the company generates income. Other activities that affect the company's long-term liabilities and equity are also included in the financing activities section of the cash flow statement.

Through these classifications, we will change the cash equivalents of the entire company over a certain period of time. The entire cash flow statement can also be considered as an expanded description of the balance sheet.

2.2 Common-size analysis

In this part, we will explain the categories and operations of common-size analysis. We divide the common-size analysis into two types, vertical analysis and horizontal analysis. Through these two different analyses, we can understand the specific value of the financial data of each project of the entire company and the percentage of the total. Common-size is the quickest way to categorize the three basic reports, and it also lays the foundation for the subsequent financial ratios analysis.

There are two reasons for using a common size analysis:

(1) To assess information from one period to the next in the company;

(2) To assess the company's situation relative to its competitors.

In general, the most important reason for shareholders or investors to perform common-size analysis on a company is the first one. They hope to judge whether the company is of development value or whether it has development prospects by comparing the changes of the company in the past five years or nearly ten years.

The company's managers, such as CFOs, conduct common-size analysis on the company mainly to compare whether the company is competitive and whether it is more competitive with the same type of company on the market.

2.2.1 Vertical analysis

Vertical analysis is a kind of common-size analysis. It expresses the proportion of

a certain data in this type of data. In a certain period of time, the ratio is increased or decreased. before getting the histogram, we need to get a list of the required data, and then get a proportional histogram according to the classification in the table.

To conduct a vertical analysis of income statement, sales figure is generally used as the base and all other components of income statement like cost of sales, gross profit, operating expenses, income tax, and net income etc. are shown as a percentage of sales.

According to the above example, in the Walton Advanced Engineering company, we can get the formula according to the following classification:

$$\begin{aligned} \text{total revenues} \\ = \ & \text{sale} + \text{non operating income} \\ & + \text{non operating interest income} \\ & + \text{equity inaffiliates} \end{aligned} \tag{2.3}$$

$$\text{percentage of sale} = \frac{sale}{total\ revenues} \cdot 100\% \tag{2.4}$$

According to this formula we can get the result of the vertical analysis of the revenues in the income statement. And tabulate the drawing for this classification.

2.2.2 Horizontal analysis

Horizontal analysis allows us to know how a fixed piece of data changes in different years. Similarly, we need to have a clear list of data before we get an intuitive line chart, sorting the data one by one, and knowing which data should be compared to which data.

Since the example of how to classify projects has been given in 2.2.1, it will not be described here. In the process of horizontal analysis, it is simpler than vertical analysis. It only needs to complete the step of formula (2.3). Then according to the value of each time period, the annual report is generally the main one, which is that we generally think that this is the obvious display of different data changes every year.

2.3 Financial ratios

The financial ratio or accounting ratio is the relative size of two selected values taken from the company's financial statements. Often used for accounting, there are many standard ratios that are used to assess the overall financial situation of a company or other organization. The financial ratio can be used by the company's internal managers, the company's existing and potential shareholders (owners), and the company's creditors. Financial analysts use financial ratios to compare the strengths and weaknesses of each company.

The values used in calculating the financial ratio are derived from the balance sheet, income statement, cash flow statement or (sometimes) statement of changes in equity. These include the company's "accounting statements" or financial statements. The data for the report is based on the accounting methods and accounting standards used by the organization.

Overall, we divided the entire financial ratios into four broad categories, namely profitability ratios, liquidity ratios, debt ratios and activity ratios.

2.3.1 Profitability ratios

The profitability ratio is a type of financial indicator used to assess the ability of an enterprise to use a specific point in time to generate revenue relative to its income, operating costs, balance sheet assets, and shareholders' equity.

The profitability ratios consist of four, operating profit margin (OPM), net profit margin (NPM), return on assets (ROA) and return on equity (ROE).

Earnings before interest and tax (EBIT) is same as operating income. Both operating income and revenue figures can be obtained from the income statement of a business.

The formulas for these four rats are the following (2.5) to (2.8)

$$\text{OPM} = \frac{EBIT}{Revenues} \tag{2.5}$$

Operating profit margin (OPM) or return on sales ratio is the ratio of operating income of a business to its revenue. It is profitability ratio showing operating income as a percentage of revenue.

$$\text{NPM} = \frac{EAT}{Revenues} \tag{2.6}$$

Net profit margin (NPM) is the most basic profitability ratio that measures the percentage of net income of an entity to its net sales. It represents the proportion of sales that is left over after all relevant expenses have been adjusted.

Net profit margin is used to compare profitability of competitors in the same industry. It can also be used to determine the profitability potential of different industries. While companies in some industries are able to generate high net profit margin, other industries offer very narrow margins. It depends on the extent of competition, elasticity of demand, production differentiation, etc. of the relevant product or market.

$$\text{ROA} = \frac{EBIT}{A} (or \frac{OP}{A}) \tag{2.7}$$

Profitability is assessed on the basis of costs and expenses and compared to assets to understand the efficiency of the company in deploying assets to generate sales and final profits. The return in the ROA ratio usually refers to net profit or net income, that is, the amount of sales revenue after all costs, expenses, and taxes.

The more assets a company accumulates the more sales and profits the company can generate. Since economies of scale help reduce costs and increase profit margins, returns may grow faster than assets and ultimately increase return on assets.

$$\text{ROE} = \frac{EAT}{Equity} \tag{2.8}$$

ROE is the closest relationship to corporate equity holders because it measures their ability to receive returns on equity investments. When equity does not increase,

the return on equity may increase significantly as it can help to achieve higher returns from a larger asset base.

As companies increase asset size and generate better returns with higher profit margins, shareholders can retain most of the return growth when debt use leads to additional assets.

2.3.2 Liquidity ratios

Liquidity ratios are an important class of financial indicators used to determine the debtor's ability to repay current debt without increasing external capital. The liquidity ratio measures the company's ability to pay debt and its margin of safety by calculating indicators including current ratio, quick ratio, and operating cash flow ratio.

Analyze the relationship between current liabilities and current assets to assess the coverage of short-term debt in an emergency.

There are three liquidity ratios; they are very similar but different. They are current ratio, quick ratio and cash ratio.

The following formulas (2.9) to (2.11) are the formulas of the liquidity ratios

$$\text{current ratio} = \frac{current\ \ assets}{current\ \ liabilities} \tag{2.9}$$

The current ratio measures the company's ability to repay its current liabilities (payable within one year), as well as current assets such as cash, accounts receivable and inventory. The higher the ratio, the better the company's liquidity.

$$\text{quick ratio} = \frac{current\ \ assets - inventories}{current\ \ liabilities} \tag{2.10}$$

The quick ratio measures a company's ability to meet its short-term debt with its most liquid assets.

$$\text{cash ratio} = \frac{cash + market\ \ securities}{current\ \ liabilities} \tag{2.11}$$

The cash ratio is the ratio of the company's total cash and cash equivalents to its current liabilities. This indicator calculates the company's ability to repay its short-term debt using readily liquidated cash resources. The cash ratio is most commonly used to measure a company's liquidity. This indicator calculates the company's ability to pay its current liabilities using only its cash and cash equivalents. If the company is forced to pay all current liabilities immediately, the indicator shows that the company has the ability to do so without selling or liquidating other assets.

2.3.3 Solvency ratios

The solvency ratio is a key indicator of a company's ability to perform its debt and is often used by potential commercial lenders. The solvency ratio indicates whether the company's cash flow is sufficient to meet its short-term and long-term liabilities. The lower the company's solvency ratio, the greater the likelihood of defaulting on debt.

In this solvency ratio we only have two ratios to introduce, they are the debt ratio and the debt-to-equity ratio.

The next (2.12) and (2.13) are the formulas for these two ratios.

$$\text{debt ratio} = \frac{total\ \ liabilities}{total\ \ assests} \tag{2.12}$$

The debt ratio is a financial ratio that measures the degree of leverage of a company. The debt ratio is defined as the ratio of total debt to total assets, expressed as a decimal or percentage. It can be interpreted as the proportion of company assets financed by debt.

The higher the debt ratio, the higher the company's leverage, which means greater financial risk. At the same time, leverage is an important tool for companies to develop, and many companies find sustainable use of debt.

$$\text{debt to equity ratio} = \frac{total\ \ liabilities}{equity} \tag{2.13}$$

The debt-to-equity ratio is a special type of gearing ratio. This ratio is used to assess the company's financial leverage. The D / E ratio is an important indicator used in corporate finance. It measures the extent to which a company finances its operations through debt and wholly-owned funds.

2.3.4 Activity ratios

The activity ratio is a type of financial ratio that measures the ability of an enterprise to convert different accounts on the balance sheet into cash or sales. Activity ratios measure a company's relative efficiency based on its use of assets, leverage, or other similar balance sheet items, and are important to determine whether a company's management is doing well enough to generate revenue and cash from its resources.

There are four rats in the activity ratio that need to be introduced, but three of them are settled by the number of times, and the other is more special, the unit is the number of days.

The four ratios are average collection period (ACP), account receivable turnover (ART), inventory turnover (IT) and total assets turnover (TAT). Among them, only the average collection period (ACP) is the number of days, and the other three units are the number of times. But these four rats are to reflect the flow rate and efficiency of the company's liquidity.

The next (2.14) to (2.17) are the four formulas for activity ratios.

$$\text{ACP} = \frac{account\ \ receivable}{revenues} \cdot 360 \qquad (2.14)$$

$$\text{ART} = \frac{revenues}{account\ \ receivable} \qquad (2.15)$$

Average collection period (ACP) is a strong indication of a firm’s liquidity over the accounts receivable, which is the money that customers owe to the company, as well as of the company’s credit policies. A short average collection period suggests a tight

credit policy and effective management of accounts receivable, which both allow the firm to meet its short-term obligations.

The receivables turnover rate determines the ability of a company to collect money from customers. Total credit sales divided by the average receivable balance for a specific period. This activity ratio calculates the ability of management to receive cash. A low ratio indicates a defect in the collection process.

Both ACP and ART actually show the turnover efficiency of accounts receivable, but only use different methods and units.

$$\mathrm{IT} = \frac{cost\ \ of\ \ good\ \ sold}{average\ \ inventory} \tag{2.16}$$

Inventory turnover rate measures the frequency of sales of inventory balances during the accounting period. Cost of sales divided by average inventory for a specific period. Higher calculations indicate that stocks are quickly converted to sales and cash. A useful way to use this activity ratio is to compare it to the previous period.

$$\mathrm{TAT} = \frac{revenues}{total\ \ assets} \tag{2.17}$$

Total asset turnover rate measures the efficiency with which an entity uses its assets for sales. Total sales divided by total assets to understand the proficiency of the company in using its assets. A smaller ratio may indicate that the company holds a higher level of inventory than sales.

2.4 Pyramidal decomposition analysis

The pyramidal decomposition analysis, also known as DuPont analysis, is a way to analyze the financial situation of a company by using the relationship between the main financial ratios. Specifically, it is a classic method used to evaluate a company's profitability and return on equity, and to evaluate corporate performance from a financial perspective.

The most striking feature of the DuPont model is that it combines several internal ratios to evaluate the operational efficiency and financial status of the company to form

a complete indicator system, which is finally reflected by the equity return rate. DuPont analysis helps management to more clearly see the determinants of basic equity yields, as well as the correlation between net sales profits and total asset turnover and debt ratios, providing management with a clear A roadmap to examine the efficiency of the company's asset management and whether it maximizes the return on investment of shareholders.

In this paper, we perform pyramid decomposition on return on equity (ROE) to get the formula (2.18).

$$\text{ROE} = \frac{EAT}{E} = \frac{EAT}{Revenues} \cdot \frac{Revenues}{A} \cdot \frac{A}{E} \tag{2.18}$$

The DuPont analysis looks at three main components of the ROE ratio:

- Profit Margin
- Total Asset Turnover
- Financial Leverage

Through this decomposition formula (2. 18) we have four ways to analyze what factors affect the ROE. In this section we only introduce one, namely the logarithmic decomposition method.

First we need to calculate the change value of the same data in the next two years. There are three variations here, namely absolute change, index of change and relative change. The calculation formulas are (2.19) to (2.21) respectively.

$$\Delta X = X_1 - X_0 \tag{2.19}$$

$$I_X = \frac{X_1}{X_0} \tag{2.20}$$

$$R_X = \frac{X_1 - X_0}{X_0} \tag{2.21}$$

According to the formula (2.19) to (2. 21), the four ratios appearing in the formula

(2.18) can be obtained by transforming 12 annual data.

Then, according to formula (2.22), we can get the magnitude of the absolute change in the final ROE among the three ratio factors every two years.

$$\Delta X_{ai} = \frac{lnI_{ai}}{lnI_X} \cdot \ \Delta \mathrm{X} \tag{2.22}$$

By calculating the change value over the five years, each ratio can get four different change values. By counting these values, the tabulation plot can know which data has the greatest impact on the ROE. And we can check the whole result, because the sum of the three ratios of ROE influence is the absolute change of ROE for two years.

The calculation formula is as follows (2.23).

$$\Delta \mathrm{X}_i = \Delta X_{1i} + \Delta X_{2i} + \Delta X_{3i} \tag{2.23}$$

2.5 Sensitivity analysis

Sensitivity analysis refers to an indeterminate analysis technique that studies the degree of influence of a certain change on a certain key or a set of key indicators from the perspective of quantitative analysis. The essence is to explain the law that the key indicators are affected by the changes of these factors by changing the values of the relevant variables one by one.

Sensitivity factors can generally be analyzed by selecting key parameters (such as sales revenue, operating costs, production capacity, initial investment, life cycle, construction period, and production period). If a small change in a parameter can lead to a large change in the economic performance indicator, then this parameter is called a sensitivity factor, otherwise it is called an insensitive factor.

For example, the formula for calculating the profit sensitivity indicator is:

Profit sensitivity index of any first factor = intermediate variable base of the factor ÷ profit base × 100%

Since the DuPont analysis has been performed before, the sensitivity analysis is still based on ROE analysis. The decomposition formula of ROE is the formula (2.18). So we get three uncertainties:

- Profit Margin
- Total Asset Turnover
- Financial Leverage

Then calculate the impact of uncertain factors. Under the condition of fixing other factors, change one of the uncertain factors; then, change another factor (still keep the other factors unchanged), and find out the degree of influence of an uncertain factor on the target value of the program benefit index.

Finally, the changes in the uncertainties are tabulated, and the analysis is made to reduce the risk.

3 Characteristics of Walton Advanced Engineering Inc. Company

Walton Advanced Engineering Inc. located in the processing and exporting area of Kaohsiung, South Taiwan, was established in April 1995.

Walton Advanced Engineering Inc. is a private company. Of course, when we use Chinese to translate this company, we will call it "Huadong Technology", but there is also a company called "Nanjing Huadong Electronic Technology Co., Ltd." in mainland China. Therefore, we still refer to it in the name of "Walton Advanced Engineering Inc." in this article.

3.1 History of the company

This Taiwanese private enterprise has been established for 17 years, but its history is far more than 17 years. Walton Advanced Engineering Inc. was established in 2002 to integrate Huaxin Advanced Electronics and its subsidiary, East China Advanced Electronics. After its establishment, it was officially renamed as Walton Advanced Engineering Inc., and was listed and traded in October 2007. Among the two companies, Huaxin Advanced Electronics Co., Ltd. was established in 1995. In April, the atomic company East China Advanced Electronics Co., Ltd. was established in July 1998. So we think this company is really not a new business.

But the chairman of Walton Advanced Engineering Inc. believes that Walton Advanced Engineering Inc. was an excellent company that founded in 1995 and in 2002 annexed the company of Huaxin Advanced Electronics. However, Walton Advanced Engineering Inc. has been a subsidiary of Huaxin Gorgeous Group. Its main customers are Winbond Electronics in Taiwan and some electronics manufacturers in Japan.

Because the company's history is too long, and it is not even directly

developed by a company, the company's shareholder structure is very complicated. The shareholder structure of Walton Advanced Engineering Inc. comes from Huasheng Lihua's semiconductor business group, Winbond Electronics and Toshiba Japan. Of course, these do not affect our analysis of the company's financial statements.

3.2 Product of the company

Walton Advanced Engineering Inc. is an electronics company that produces semiconductor products. The company's products are not directly applicable to the public, but require more manufacturers to process. But many products in life are inseparable from semiconductor parts, such as televisions, cars and so on. Walton Advanced Engineering Inc. manufactures semiconductor products for medical applications, medical electronics and green energy electronics for IC applications, and provides corresponding testing services.

These products are very unfamiliar to the eyes of non-electronic engineering or related professionals. However, in today's rapid industrial development, more and more electrical appliances are needed for semiconductor parts, so the market for semiconductor parts is still very large. But because this is not a product that can be directly applied, people can't directly access such products, so Walton Advanced Engineering Inc. directly supplies the products to various manufacturers who need the products, and the products can be directly invested by them. The product used in life, and the trademark of the product is affixed. For example, just like Huawei's mobile phone will use Sony's camera in the company's products, semiconductor materials are also a small part that will be applied to different products.

Although I don't know which products Walton Advanced Engineering

Inc. will be applied to, it is not a small workshop to produce a single product. In contrast, the types of semiconductor products by Walton Advanced Engineering Inc. produced are very diverse and complex, and they are very wide and distinctive. Most of the semiconductor products produced are developed towards high density, high heat dissipation, multi-legged and miniaturized products, and have strong market competitiveness.

At the same time, Walton Advanced Engineering Inc.'s customer base is also very stable, and the annual product demand is basically stable, because products that are not directly sold to consumers are less affected by market changes. I think this should be a good thing for us to conduct financial analysis.

3.3 Service projects

Walton Advanced Engineering Inc. not only provides customers with packaged products, but also provides testing services. Among them, packaged products and test services account for 50% of the company's business.

The main service items are:

1. Product characteristics test analysis
2. Product test program development and writing
3. Test model differential certification
4. Improve product yield (product yield improvement)

From the testing services of the past few years, Walton Advanced Engineering Inc. has the most precision, resolution and high efficiency test machines and equipment on the market, and provides customers with the most reliable and perfect service. According to the July 2003 issue of the Semiconductor Society, Walton Advanced Engineering Inc. is the ninth largest professional packaging and testing facility in the world. In addition to the existing traditional industries such as medical electronics and

automotive electronics, Walton Advanced Engineering Inc. is also developing in the direction of memory modules and mobile communication modules.

3.4 Company welfare

In addition to the most basic welfare needs that labor laws should have, Walton Advanced Engineering Inc. offer:

Dividend / Rights Issue

1. Employee bonus (clearly stated in the company charter)

At the end of each fiscal year, the company settles the operating surplus. In addition to prioritizing the loss of the previous years and providing the statutory common reserve fund according to law, it will allocate a certain percentage of the remaining net surplus to the dividends of all employees.

2. Quarterly competition to establish a talent plan bonus

Each season, KVD is set by management to target different targets and performances for each season. If the operational target is reached and the accumulated quarterly, pre-tax and pre-interest earnings are awarded quarterly bonuses.

3. Employee stock subscription

Start the treasury stock system in a timely manner and provide excellent employee stock subscription plans.

4 Financial Situation Assessment of Walton Advanced Engineering Inc. Company

The objective in this part is to analysis the company's financial situation through the data in the financial statements. There are four analytical methods used in this chapter. Through these analyses, we can know Walton Advanced Engineering's profitability, capital operation and liquidity in the past five years.

4.1 Common size analysis

Common size analysis is divided into vertical analysis and horizontal analysis. Through common size analysis, we can know the changes in the company's internal assets and liabilities within the past five years, and can understand which item of assets or liabilities and equity changes which led to the total assets of the year.

4.1.1 Common size analysis in assets and liabilities

Table 4.1 shows the horizontal data of the assets.

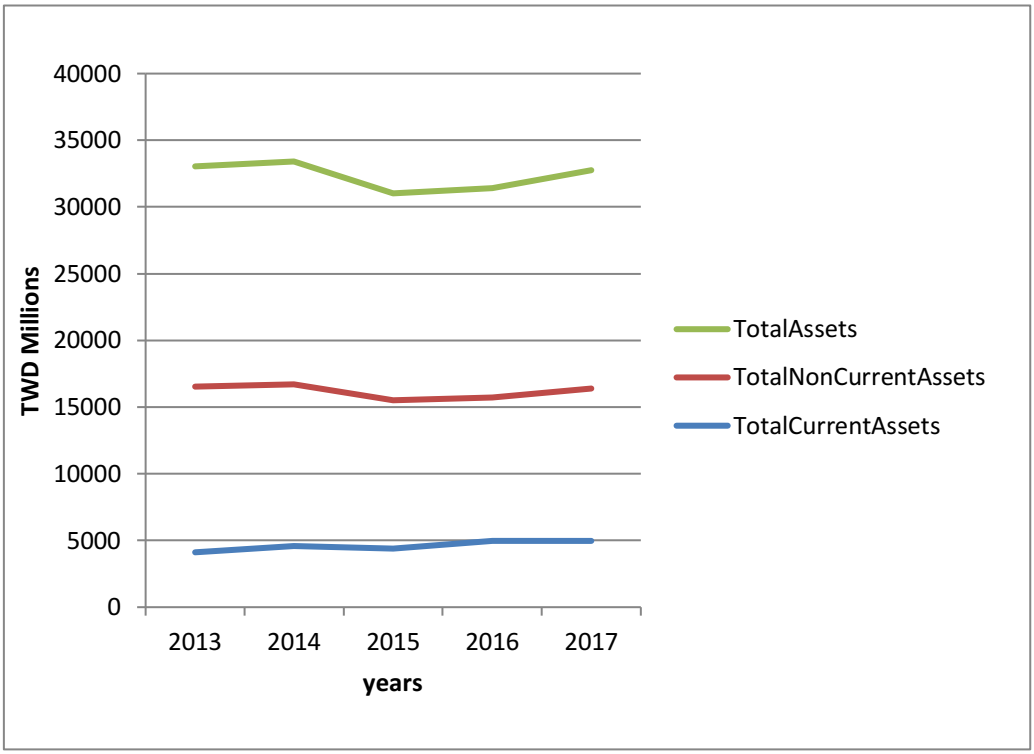
Table 4.1 Horizontal Analysis of Assets（TWD Millions）

	2013	2014	2015	2016	2017
Total Current Assets	4113	4572	4394	4970	4944
Total Non-Current Assets	12419	12133	11116	10743	11446
Total Assets	16532	16705	15510	15713	16390

And the chart 4.1 shows the horizontal analysis chart of assets.

The chart 4.1 shows that the result of the horizontal analysis of Walton Advanced Engineering’s assets forms 2013 to 2017. From the results shown in the chart, we can see that the liquid assets of Walton Advanced Engineering have been in a stable state and have risen slightly. However, there was a small decline in total assets between 2014 and 2015, mainly due to the decline in non-current assets.

Chart 4.1 Horizontal Analysis of Assets



And then，table 4.2 and chart 4.2 shows the vertical analysis of the assets

Table 4.2 Vertical analysis of the assets（%）

	2013	2014	2015	2016	2017
Total Current Assets	25	27	28	32	30
Total Non-Current Assets	75	73	72	68	70
Total Assets	100	100	100	100	100

Chart 4.2 Vertical analyses of the assets

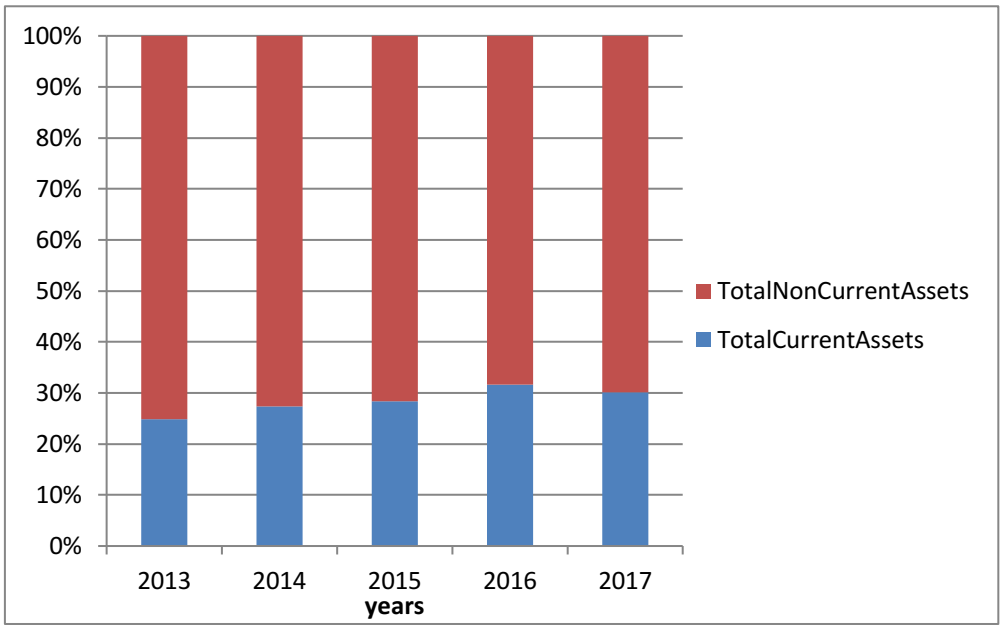
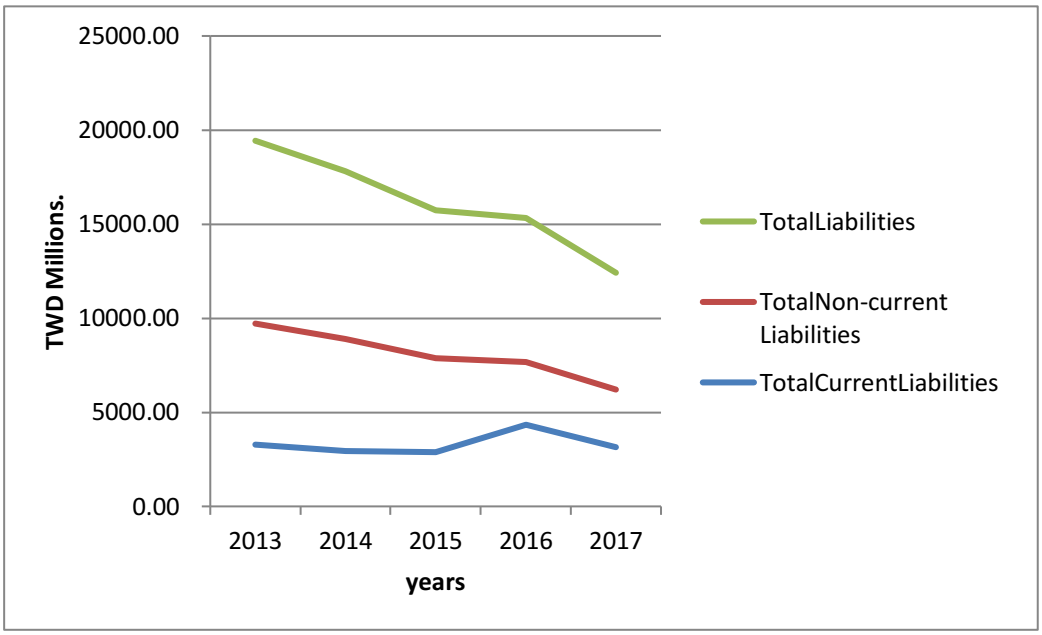


Table 4.3 and chart 4.3 shows the horizontal analysis of the liabilities

Table 4.3 Horizontal Analysis of Liabilities（TWD Millions.）

	2013	2014	2015	2016	2017
Total Current Liabilities	3289.00	2925.00	2882.00	4340.00	3148.00
Total Non-current Liabilities	6427.00	5984.00	4990.00	3324.00	3060.00
Total Liabilities	9716.00	8909.00	7872.00	7664.00	6208.00

Chart 4.3 Horizontal Analysis of Liabilities



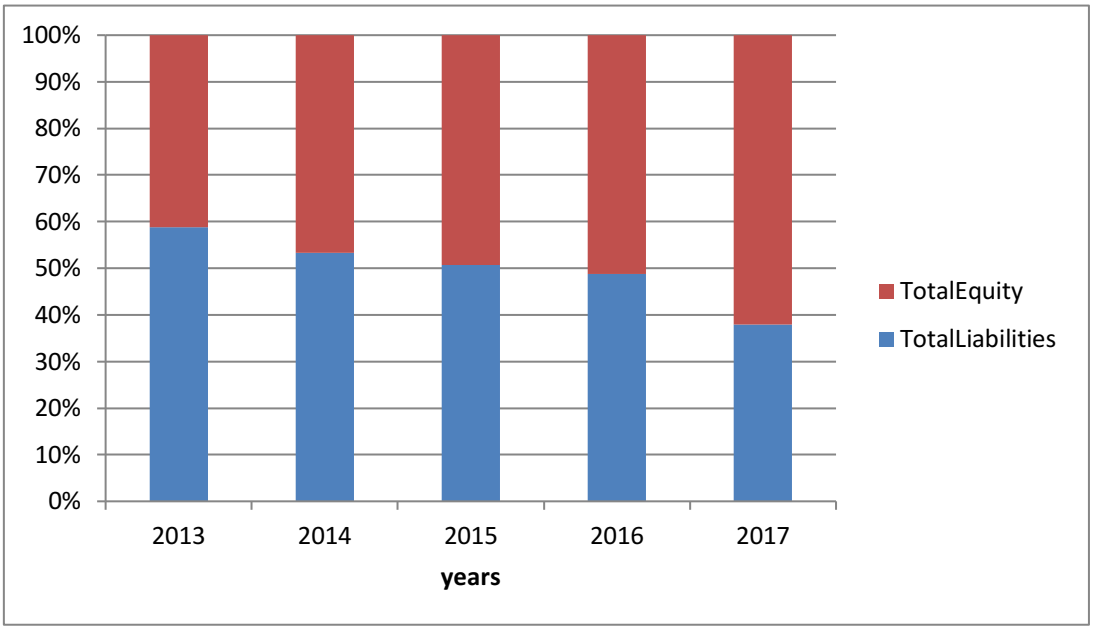
From the debt analysis of Walton Advanced Engineering, the company's liabilities have been declining, which proves that the company's shareholders' equity should be rising. So next we look at the company's profit distribution between 2013 and 2017 through a vertical analysis of liabilities and equity.

Table 4.4 and chart 4.4 shows the vertical analysis of the liabilities and equity.

Table 4.4 Structure of Liabilities and equity（TWD Millions.）

	2013	2014	2015	2016	2017
Total Equity	6816	7796	7638	8049	10182
Total Liabilities	9716	8909	7872	7664	6208

Chart 4.4 Structure of Liabilities and equity



The vertical analysis in chart 4.4 proves it. In the absence of any increase in total assets, the company's liabilities have been decreasing over the past five years, which means that shareholders' equity must increase. But this is not necessarily a good thing for the Walton Advanced Engineering company.

This is a distinct feature of many Chinese companies, namely, the concentration of company equity, reducing liability risk in order to improve shareholders' equity. Since most companies in China are private or family-owned and hold company managers, most companies do not aim to expand the company's size, but to obtain more benefits.

This kind of management method is not good for the company. From the treatment of profit distribution in 2014, the manager cannot increase the intention of the company, but pay more attention to increasing shareholders' equity. So in the past five years, the company's performance is not bad, but the total assets have barely increased.

4.1.2 Common size analysis in income statement

In income statement， We can know about the income of the company's liquidity. The company's income can directly affect the company's financial situation and reflect

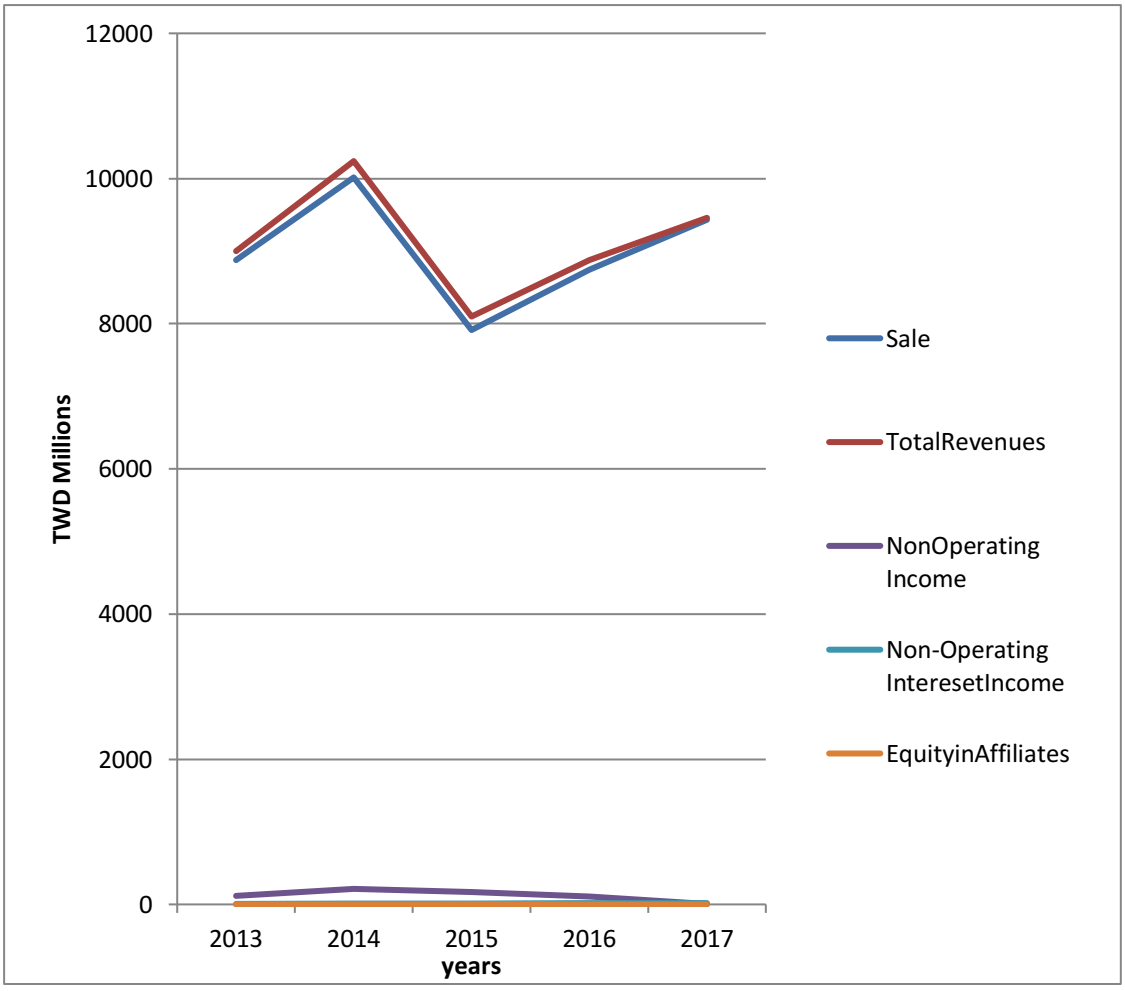
the market's acceptance of the company's products. And the company's income affects the capital investment in the next year.

Table 4.5 shows the date in decomposition of revenues，the chart 4.5 shows horizontal analysis of total revenues.

Table 4.5 Horizontal Analysis of Total Revenues（TWD Millions.）

	2013	2014	2015	2016	2017
Sale	8872	10015	7913	8748	9432
Non-Operating Income	117	214	169	106	6
Non-Operating Interest Income	7	11	15	18	18
Equity in Affiliates	0	0	2	0	0
Total Revenues	8996	10240	8099	8872	9456

Chart 4.5 Horizontal Analysis of total Revenues



As can be seen from chart 4.5, the company's total revenues is basically equivalent to sales, that is, the company's main source of income is the sale of

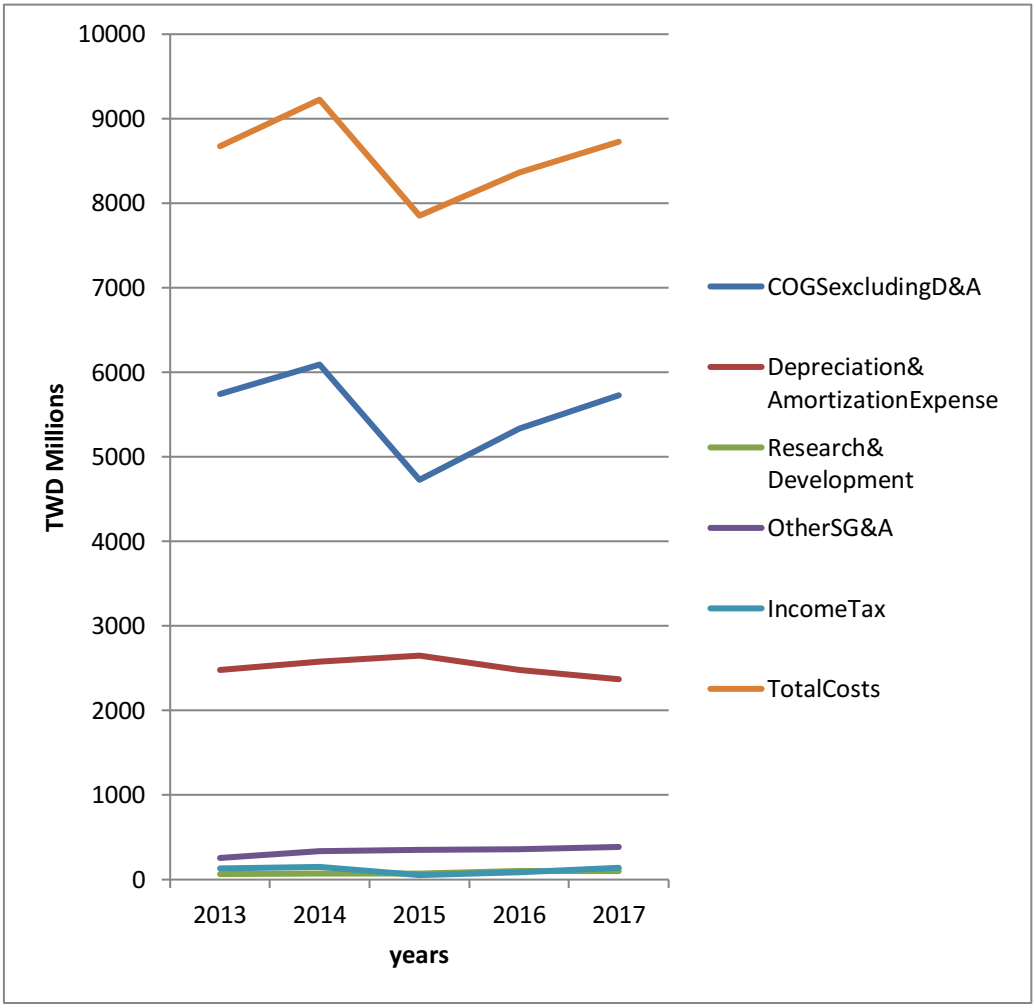
products, and other incomes are not much, and cannot affect the company's total revenue. The company's revenue peaked in 2014, but it fell to its lowest point in 2015, and it was relatively stable in the rest of the year, rising slightly from 2016 to 2017.

Table 4.6 and chart 4.6 shows the horizontal analysis of the total cost.

Table 4.6 Horizontal Analysis of Total Costs（TWD Millions）

	2013	2014	2015	2016	2017
COGS excluding D&A	5747	6092	4729	5338	5732
Depreciation & Amortization Expense	2477	2575	2649	2479	2370
Research & Development	65	69	72	98	100
Other SG&A	256	340	351	360	386
Income Tax	130	150	53	87	139
Total Costs	8675	9226	7854	8362	8727

Chart 4.6 Horizontal Analysis of Total Costs



From the perspective of capital expenditure, the main cost impact is mainly composed of product cost and depreciation. Similar to the income situation, Walton

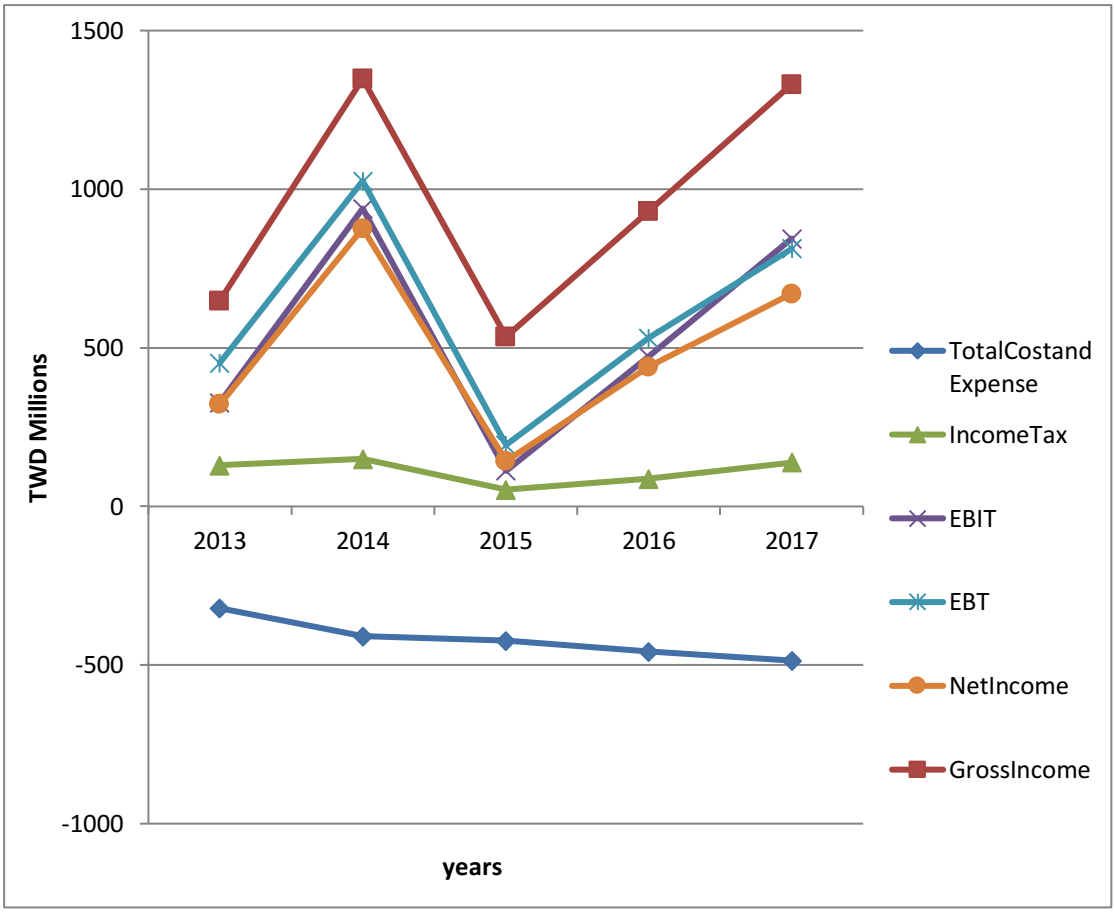
Advanced Engineering experienced large fluctuations in total cost in 2015, and other years are in a slow rising state. The reason for the significant reduction in total costs was that the company reduced its spending on goods sales in 2015. I think this is also the reason why the sales of goods have dropped significantly in 2015, as shown in table 4.5.

Table 4.7 shows the date in income statement, and the chart 4.7 shows horizontal analysis of income statement.

Table 4.7 Horizontal Analysis of PL（TWD Millions）

	2013	2014	2015	2016	2017
Gross Income	648	1348	535	931	1330
Total Cost and Expense	-321	-409	-423	-458	-486
Income Tax	130	150	53	87	139
EBIT	327	939	112	473	844
EBT	452	1026	194	531	813
Net Income	322	876	143	440	670

Chart 4.7 Horizontal Analysis of PL



From the final overall profit point of view, it is obvious that due to the reduction in the cost of input products, the decrease in sales and other expenses, the net income in 2015 fell to the lowest point of the five years, only 143 (TWD Millions. In sharp contrast, in 2014, the increase in investment made the profit of the year reach the peak of 876 (TWD Millions.).

After the company's profits fell from the highest point in the past five years to the lowest point, it slowly recovered. But combined with the analysis of part4.1.1, it is not difficult to find that the company's total assets are very stable regardless of the company's profit. Although there was no significant increase in total assets, there was no significant decline in the company's profit in 2015. This is also a benefit of Chinese familial enterprises. Although company managers are not putting the expansion company first, conservative management strategies can better cope with the crisis.

4.2 Financial Analysis of the Company

In this part, we will conduct financial analysis by calculating some financial ratio and by using DuPont analysis which both are already mentioned in chapter 2 to estimate the financial condition of the company Walton Advanced Engineering.

4.2.1Profitability ratios of Walton Advanced Engineering Company

Profitability ratios are financial ratios that assess the benefits that a company's decision makers can bring to a company owner or shareholder over a period of time. The profitability ratios contain a series of ratios. Here we introduce four types: net profit margin (NPM), return on assets (ROA), return on equity (ROE), and operating profit margin (OPM).

Table 4.8 shows the date of the liquidity ratios, and 4.9 shows the profitability ratios from 2013 to 2017.

Table 4.8 Date of the profitability ratios（TWD Millions.）

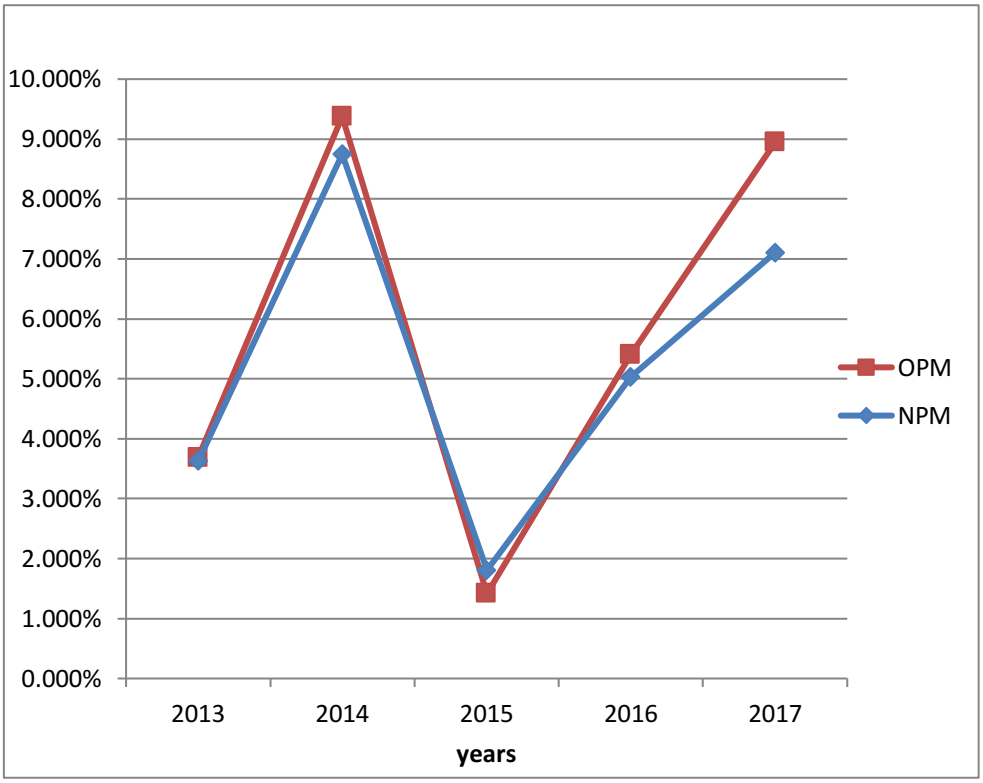
EBIT	327	939	112	473	844
Sales/Revenue	8872	10015	7913	8748	9432
Net Income	322	876	143	440	670
Total Equity	6816	7796	7638	8049	10182
Total Assets	16532	16705	15510	15713	16390

Table 4.9 Profitability ratios （%）

NPM	3.63	8.75	1.81	5.03	7.10
ROA	1.98	5.62	0.72	3.01	5.15
ROE	4.72	11.24	1.87	5.47	6.58
OPM	3.69	9.38	1.42	5.41	8.95

The chart 4.8 shows the trend of the ratios of operating profit margin and net profit margin.

Chart 4.8 Trend of operating profit margin and net profit margin



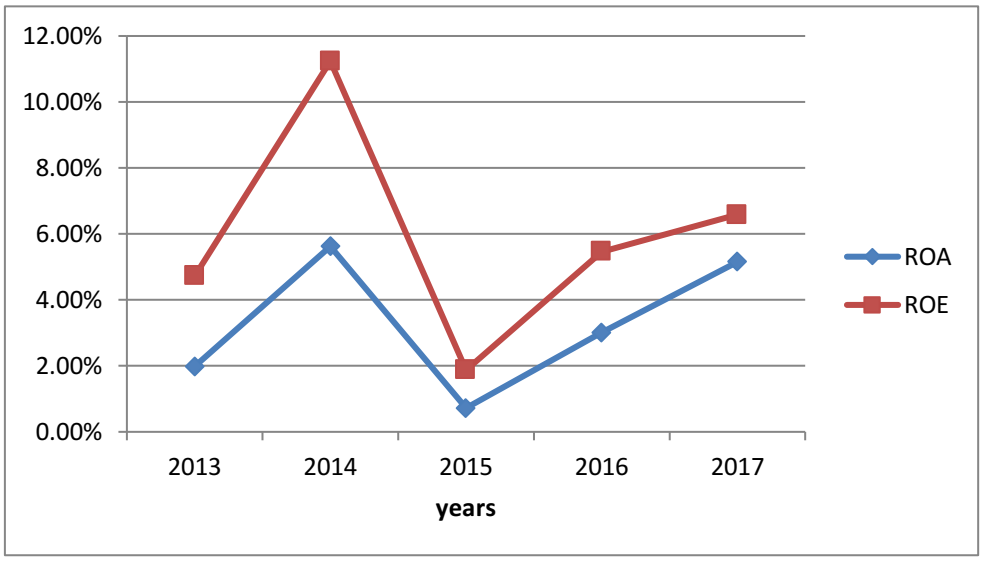
In chart 4.8, we analyzed the company's income between 2013 and 2017, and the value of profitability ratios is inextricably linked to the company's profit. According to the approximate distribution in chart 4.8, the value of profitability ratios is basically consistent with the above analysis. Specifically, in 2014, the ratios of operating profit margin and net profit margin were both maximum and were the lowest in 2015. Obviously, for Walton Advanced Engineering Company, the main profit comes from

operating profit, or sales revenue from products. Once the cost of the product is reduced, the revenue will also decrease. It can be seen that Walton Advanced Engineering Company has no power to market pricing; they can only produce products, but cannot determine the price of the products.

It is worth noting that we can find that the net profit margin is less than the operating profit margin in the comparison of the ratios of operating profit margin and net profit margin. This illustrates three things: First, the proportion of interest expenses and income tax is not heavy. At least compared to the company's revenues, it is very small, and these two expenses cannot affect the profits of the entire company. Second, based on the comparison of the two data, it is clear that the income tax and the interest expenses are getting bigger, although it still cannot affect the profit absolutely, but this expenditure is increasing with time. Third, the government may have some kind of subsidy for the company. From the fact that net profit margin is greater than operating profit margin in 2015, we can easily get the conclusions that EAT is greater than EBIT in 2015. Here we think that there is government support, and generally the financial statements in mainland China will be classified as non-operating profit. However, from the perspective of Taiwan's statements, I think Taiwanese companies have classified them as one of tax credit.

There are two ratios in chart 4.9，the return on assets and the return on equity.

Chart 4.9 Trend of return on assets and return on equity



The return on assets ratio measures how effectively a company can earn a return on its investment in assets. In other words, ROA shows how efficiently a company can convert the money used to purchase assets into net income or profits. As we have explained in chapter 2, the higher return on assets is, the better for the company. Because the company will earn more money by less investing.

Return on equity measures how efficiently a firm can use the money from shareholders to generate profits and grow the company. Unlike other return on investment ratios, ROE is a profitability ratio from the investor's point of view—not the company.

It can be seen from chart 4.9 that the volatility of the ROA is less than the ROE, and the fluctuations of the two rats are the same as the other two profitability ratios, which peaked in 2014 and the minimum in 2015.

4.2.2 Liquidity ratios of Walton Advanced Engineering Company

In this part，we will analyze the liquidity of the company by liquidity ratios. Liquidity ratios include current ratio, quick ratio and cash ratio. Liquidity is not only a measure of how much cash a business has. It is also a measure of how easy it will be for the company to raise enough cash or convert assets into cash.

Table 4.10 shows the data of the liquidity ratios, and table 4.11 shows the liquidity ratios between 2013 and 2017. Chart 4.10 shows the trend of liquidity ratios from 2013 to2017.

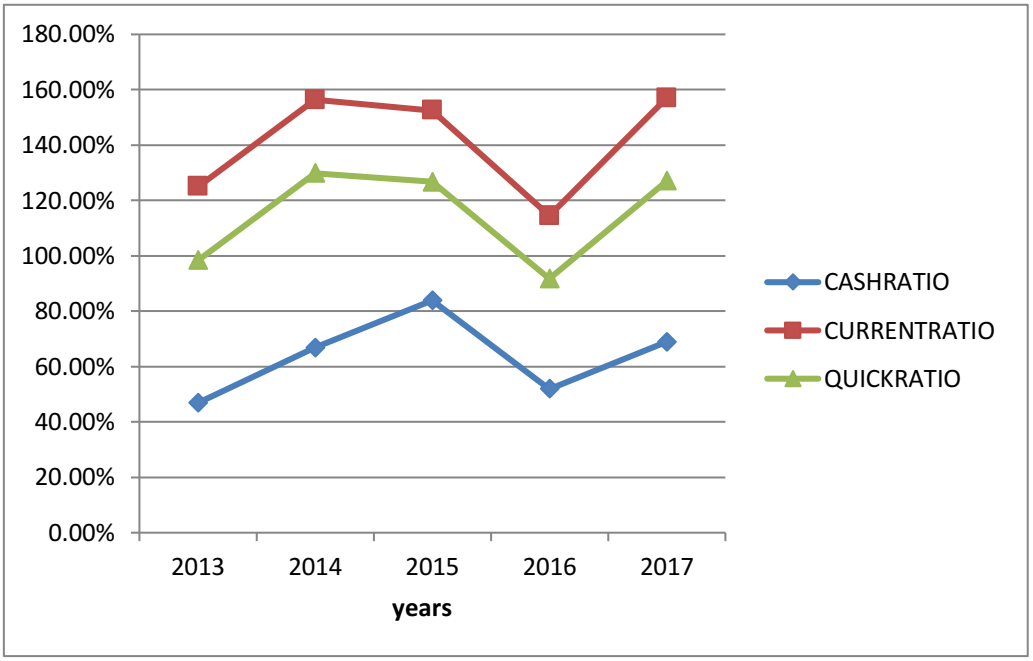
Table 4.10 Data of the liquidity ratios （TWD Millions.）

	2013	2014	2015	2016	2017
Total Current Assets	4113	4572	4394	4970	4944
CASH	1542	1954	2418	2253	2170
Inventories	877	775	742	988	944
Total Current Liabilities	3289	2925	2882	4340	3148

Table 4.11 Liquidity ratios

QUICK RATIO	0.98	1.30	1.27	0.92	1.27
CURRENT RATIO	1.25	1.56	1.52	1.15	1.57
CASH RATIO	0.47	0.67	0.84	0.52	0.69

Chart 4.10 Trends of liquidity ratios from 2013 to 2017



In theory, people want the current ratio to be greater than 1 win and hope it is less than 1. From the data in chart 4.10, Walton Advanced Engineering Company's cash flow rate has been in good shape, and between 2013 and 2017, the current ratio has been is greater than 1. And we can see that the general trend of quick ratio was similar to the trend of current ratio from 2012 to 2016. But the changes of quick ratio were not as much as current ratio. Compared to the whole, the value can be said to be moving down horizontally. However, the data fluctuation of the cash ratio is not very consistent with the current ratio. It is gratifying that the cash ratio has been in a relatively stable state. As we have known, the higher cash ratio is the concurrent ability of the company to cover its short-term debts. Therefore, it can be speculated that Walton Advanced Engineering Company has no debt risk in the short term.

4.2.3 Solvency ratios of Walton Advanced Engineering Company

In this part, we will analyze solvency of Walton Advanced Engineering Company by using some solvency ratios Solvency ratios show a company’s ability to make payments and pay off its long-term obligations to creditors, bondholders, and banks.

Better solvency ratios indicate a more creditworthy and financially sound company in the long-term.

Table 4.12 shows the data of debt ratios, and the table 4.13 shows the debt ratios including debt ratio and debt-to equity ratio from 2013 to 2017.

Table 4.12 Data of the debt ratios（TWD Millions.）

	2013	2014	2015	2016	2017
Total Equity	6816	7796	7638	8049	10182
Total Assets	16532	16705	15510	15713	16390
Total Liabilities	9716	8909	7872	7664	6208

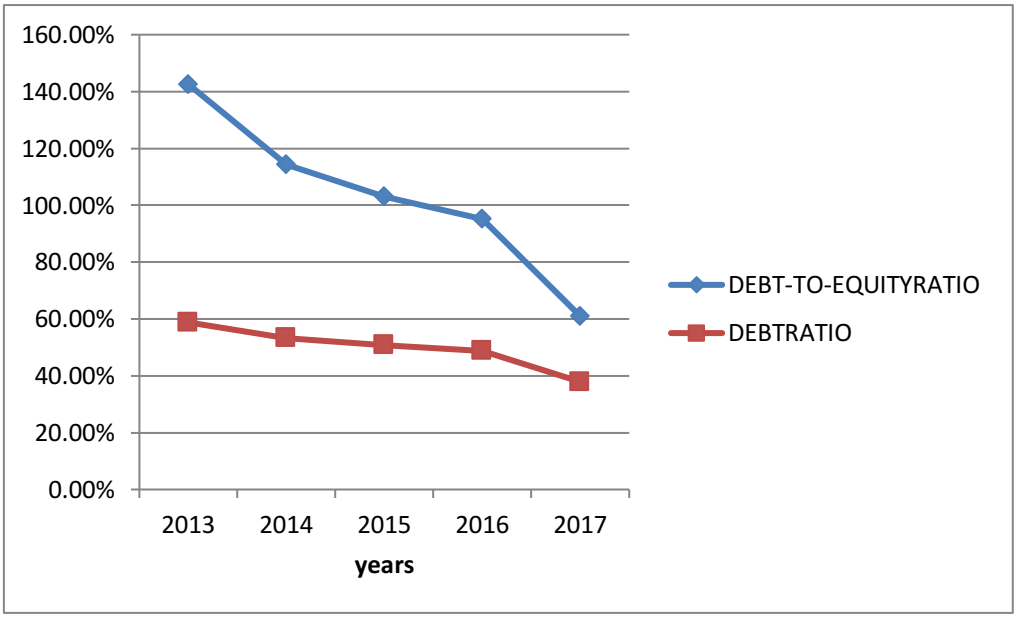
Table 4.13 Debt ratios

DEBT RATIO	0.5877	0.5333	0.5075	0.4877	0.3788
DEBT-TO-EQUITY RATIO	1.4255	1.1428	1.0306	0.9522	0.6097

From table 4.13 we can see that there was a huge decreasing of overall debt ratio from 2013 to 2017 for the total assets growth is greater than the total debts. The company has been repaying debts over the past five years. As we can see from chart 4.3, the main reduction is long-term liabilities. The company's non-current liability has been decreasing, with a small increase in current liability between 2015 and 2016, but total liabilities have been declining for the past five years.

Chart 4.11 shows the trends of debt ratios from 2013 to 2017.

Chart 4.11 Trends of debt ratios



In chart 4.11 we can see debt-to-equity ratio is similar to the debt ratio, is decreasing neither. As we have mentioned, the high debt-to-equity ratio means the high-risk and high-return financial structure, on the contrary, the low debt-to-equity ratio means low-risk, low-return financial structure. In general, it's better for company if the company's debt to equity ratio is lower than 1. We can see that between 2013 and 2017, Walton Advanced Engineering Company has an excellent effect on managing liabilities. Although the debt-to-equity ratio is more than one at the beginning, the ratio is decreasing year by year. In 2016, it is already less than 1.

Comparing the debt ratio and the debt-to-equity ratio, in Chart 4.9, we can see that although both of the rats are falling, the decline of the debt-to-equity ratio is obviously larger than the debt ratio. This shows that the increase in equity is greater than assets. In other words, the profit of the company's operations is more used to pay dividends to shareholders than to expand the company's industry. This is not very conducive to the development of the company.

4.2.4 Activity ratios of Walton Advanced Engineering Company

In this part, we will analyze how efficiency of Walton Advanced Engineering Company is to operate and generate revenues by using its assets and leverage. Activity ratios include average collection period，average payable period， accounts receivable turnover and total assets turnover. Activity ratios are most useful when compared to competitor or industry to establish whether an entity's processes are favorable or unfavorable.

The table 4.14 shows the data of activity ratios, and table 4.15 shows activity ratios of Walton Advanced Engineering Company from 2013 to 2017.

Table 4.14 Data of the activity ratios（TWD Millions.）

	2013	2014	2015	2016	2017
Total Accounts Receivable	1518.00	1702.00	932.00	1322.00	1286.00
Sales/Revenue	8872.00	10015.00	7913.00	8748.00	9432.00
Accounts Payable	941.00	1004.00	873.00	979.00	861.00
Total Assets	16532.00	16705.00	15510.00	15713.00	16390.00

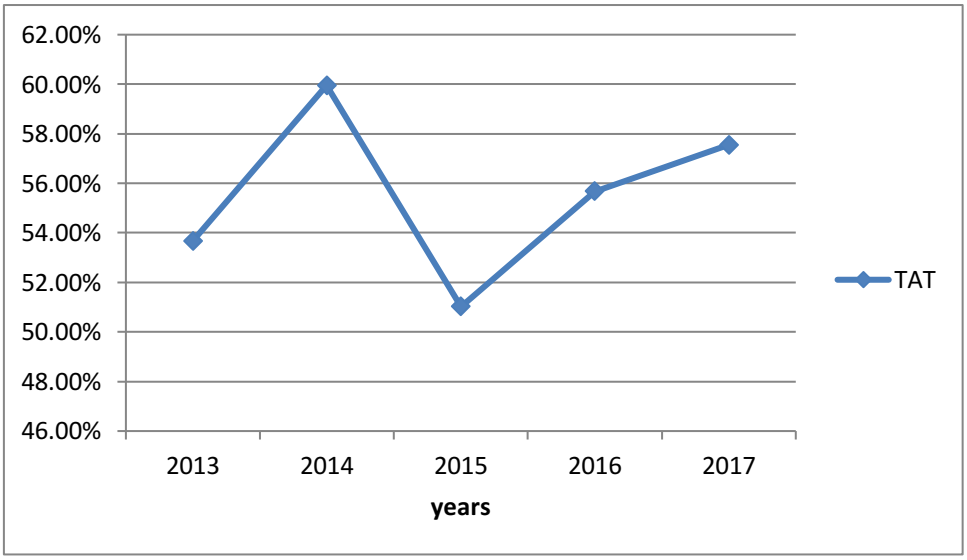
Table 4.15 Activity ratios

APP(days)	38.18	36.09	39.72	40.29	32.86
ACP(days)	61.60	61.18	42.40	54.40	49.08
ART	5.845	5.884	8.490	6.617	7.334
TAT	0.537	0.600	0.510	0.557	0.575

From the data of table 4.15, the average payable period is in a small range of fluctuations, but it is basically stable and there is not much change. The average collection period is decreasing overall. This is a good trend. In general, the shorter the average collection period is, the better the company's turnover is. Obviously, the average collection period is falling, and then the accounts receivable turnover will increase accordingly. Finally, the data for total assets turnover is also in volatility. It can be seen from the table that in other years except 2015, Walton Advanced Engineering Company has been in good operation, but from 2014 to 2015, Walton Advanced Engineering the Company’s total assets turnover has a large drop, which is evident in chart 4.12.

Chart 4.12 shows the trends of total assets turnover from 2013 to 2017.

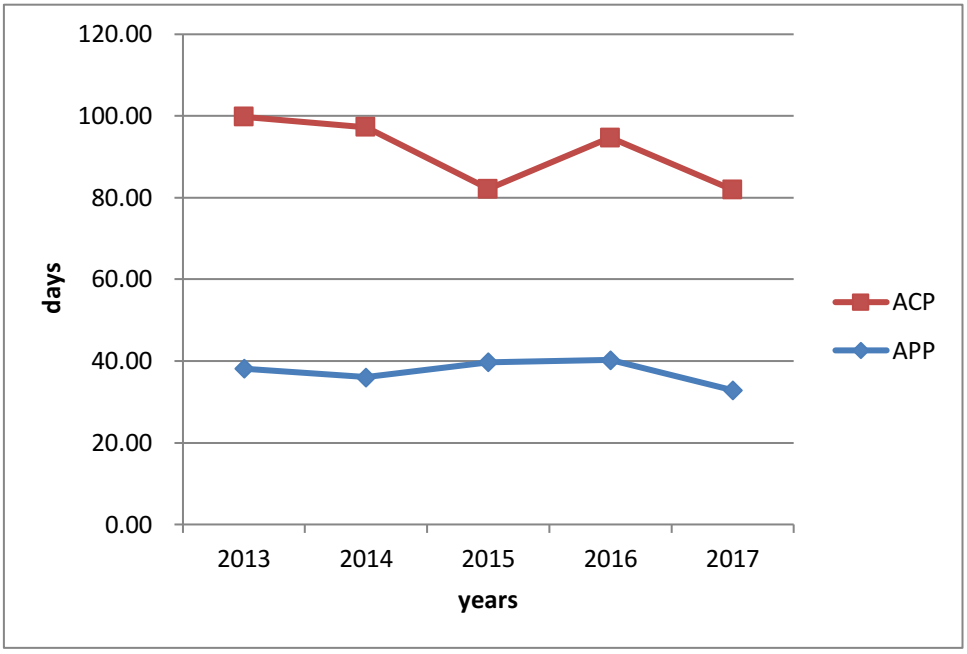
Chart 4.12 Trend of total assets turnover



From part 4.2 we can basically speculate that this is because the company reduced the investment in product production and caused the profit reduction in 2015, thus affecting the data of total assets turnover.

Chart 4.13 shows the trends of average payable period and average collection period from 2013 to 2017.

Chart 4.13 Trend of average payable period and average collection period



From the chart 4.13, we can see that although the average collection period is slightly fluctuating, it is generally down, so that the company's credibility in the buyer is rising, and we can think that as this cycle grows, the company's capital flow will become more and more accommodative.

However, from the perspective of the average payable period, it is clear that Walton Advanced Engineering Company has not obtained the trust of the supplier. And in 2017, the average payable period has been reduced again, which is very unfavorable for an industrial company.

4.3 Pyramidal decomposition of Walton Advanced Engineering Company

In this part, we will analyze the profitability of Walton Advanced Engineering Company by using pyramidal decomposition. This model was developed to analyze

ROE and the effects different business performance measures have on this ratio. Pyramidal decomposition has four methods, namely method of gradual changes, logarithmic decomposition method, functional decomposition method and integral decomposition method. In this section, we use only the second method, the logarithmic decomposition method, to analyze the Walton Advanced Engineering Company.

First, we should use the formulas (2.19) to (2.21) to get a way to calculate the changes in the ROE, so that we can get the change between 2013 and 2017. Table 4.16 shows the changes of the return of equity，including absolute change，relative change and index change.

Table 4.16 Changes of ROE

	2013	2014	2015	2016	2017
ROE	4.72%	11.24%	1.87%	5.47%	6.58%
absolute change		6.51%	-9.36%	3.59%	1.11%
relative change		137.85%	-83.34%	191.98%	20.37%
index of the change		2.38	0.17	2.92	1.20

In the pyramid decomposition, we divide the return of equity into three multiplied parts, namely net profit margin, total assets turnover and financial leverage. These three rats are again calculated from the ratio of four different financial data, so we show it in the Table 4.18.

Table 4.17 shows the data of the ratios

Table 4.13 Data of the ratios （TWD Millions.）

		2013-2014	2014-2015	2015-2016	2016-2017
EAT	322.00	876.00	143.00	440.00	670.00
Rev	8872.00	10015.00	7913.00	8748.00	9432.00
A	16532.00	16705.00	15510.00	15713.00	16390.00
E	6816.00	7796.00	7638.00	8049.00	10182.00

According to the calculation formula:

$$\Delta X_{ai} = \frac{\ln I_{ai}}{\ln I_X} \Delta X$$

We can get a change in the three base ratios over the five years and then calculate the percentage of the impact of these three data on the ROE.

Table 4.18 Index change of each item

net profit margin	0.04	0.09	0.02	0.05	0.07
index of the change		2.41	0.21	2.78	1.41
total assets turnover	0.54	0.60	0.51	0.56	0.58
index of the change		1.12	0.85	1.09	1.03
financial leverage	2.43	2.14	2.03	1.95	1.61
index of the change		0.88	0.95	0.96	0.82

Table 4.19shows the influence of each item in decomposition of ROE from 2013 to 2017. This data shows how the return of equity has changed over the past two years, and how the three ratios that make up the return of equity have changed.

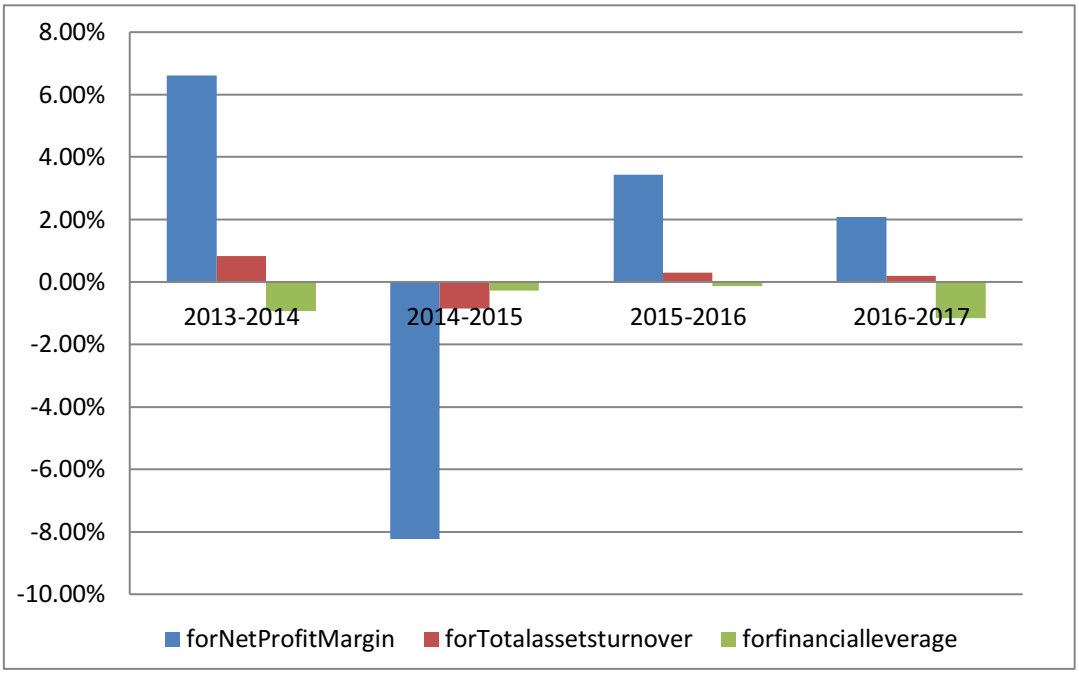
Table 4.19 Influence of each item in decomposition of ROE

	2013-2014	2014-2015	2015-2016	2016-2017
for Net Profit Margin	6.61%	-8.24%	3.43%	2.07%
for Total assets turnover	0.83%	-0.84%	0.29%	0.20%
for financial leverage	-0.93%	-0.28%	-0.13%	-1.16%
sum	6.51%	-9.36%	3.59%	1.11%

After putting together all of results, we can see from Chart 4.14 that net profit margin was always the component ratio which influenced ROE most. However, the effect was sometimes positive and sometimes negative. But we can clearly see that the impact of this ratio on return of equity has been getting smaller over the years.

Total assets turnover and financial leverage have little impact on return of equity, but the trends in the two ratios are not the same. Between 2013 and 2016, these two exchanges are constantly changing for equity. But total assets turnover is positive all the time. Only from 2014 to 2015, all ratios are negative. The impact of financial leverage on ROE between 2013 and 2017 has been negative. And this negative value increased from 2016 to 2017.

Chart 4.14 Influence of each item in decomposition of ROE



From chart 4.14，we can clearly see that net profit margin is the most influential ratio of ROE, and we can find that total assets turnover and net profit margin are generally in the same direction, affecting the value of ROE. The financial leverage is generally negative and growing.

4.4 Sensitivity analysis of Walton Advanced Engineering Company

In this section, we will use sensitivity analysis to understand the change in the corresponding ratio when a certain value changes. Sensitivity analysis is one of the methods commonly used to analyze uncertainty in the economic evaluation of investment projects. Among the uncertain factors, the sensitive factors that have important influence on the economic benefit index of the investment project are found one by one, and the degree of influence and sensitivity of the project on the economic benefit index are measured, and then the ability of the project to withstand the risk is judged. A small change in a parameter can lead to a large change in the economic benefit index, which is called a sensitivity factor.

In this part, we conduct a sensitivity analysis of the return of equity (ROE). There are four basic data that make up the return of equity, namely, earning after tax (EAT),

revenues, assets and equity.

Table 4.20 shows the date of the item in ROE.

Table 4.20 Data of the item in ROE（TWD Millions.）

	2016	2017
EAT	440	670
Rev	8748	9432
A	15713	16390
E	8049	10182

Here we only analyze the sensitivity analysis of the factors that cause ROE changes between 2016 and 2017. The four basic data decomposed from the ROE can be composed of three different ratios, which are net profit margin, total assets turnover and financial leverage. Thus each change in the underlying data will cause changes in these three ratios.

Table 4.21 shows index changes of each item in decomposition of ROE.

Table 4.21 Index change of each item in decomposition of ROE

component ratios	2016	2017	I	influence
EAT/Rev	0.050	0.071	1.412	**2.07%**
Rev/A	0.557	0.575	1.034	**0.20%**
A/E	1.952	1.610	0.825	**-1.16%**
sum	5.47%	6.58%		**1.114%**

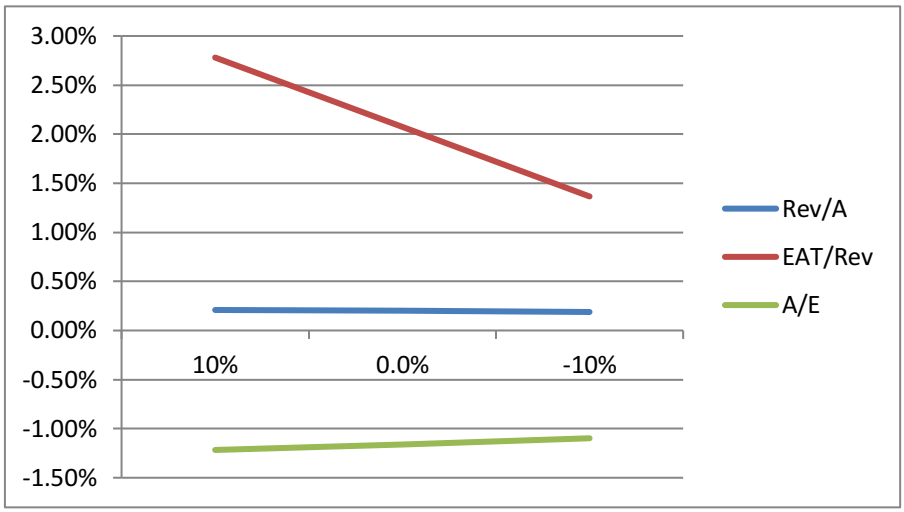
From table 4.21, we can see the values of the three ratios of net profit margin, total assets turnover and financial leverage in 2016 and 2017, respectively. Then calculate the impact of these three ratios on ROE, and change the value of the four basic data under this condition to calculate the impact of this key indicator on ROE.

Table 4.22 and chart 4.15 shows the influence of the changes of EAT.

Table 4.22 Influence of the changes of EAT

EAT change	value	EAT/Rev	Rev/A	A/E	ROE
10%	737	2.78%	0.21%	-1.22%	1.77%
0.0%	670	2.07%	0.20%	-1.16%	1.11%
-10%	603	1.37%	0.19%	-1.10%	0.46%

Chart 4.15 Influence of the changes of EAT



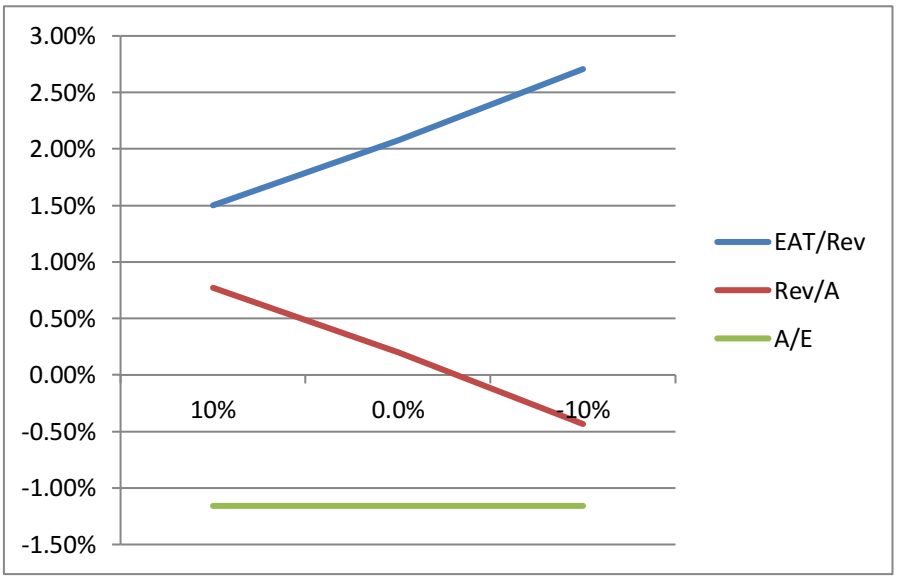
Through chart 4.15, you can get the net profit margin after changing the earring after tax. The other two rats have no changes. From the perspective of changes in ROE, as EAT increases, ROE is also increasing. This proves that the basic data of EAT has an impact on ROE.

Table 4.23 and chart 4.16 shows the influence of the changes of revenues.

Table 4.23 Influence of the changes of revenues

Rev change	value	EAT/Rev	Rev/A	A/E	ROE
10%	10375.2	1.50%	0.77%	-1.16%	1.11%
0.0%	9432	2.07%	0.20%	-1.16%	1.11%
-10%	8488.8	2.71%	-0.43%	-1.16%	1.11%

Chart 4.16 Influence of the changes of revenues



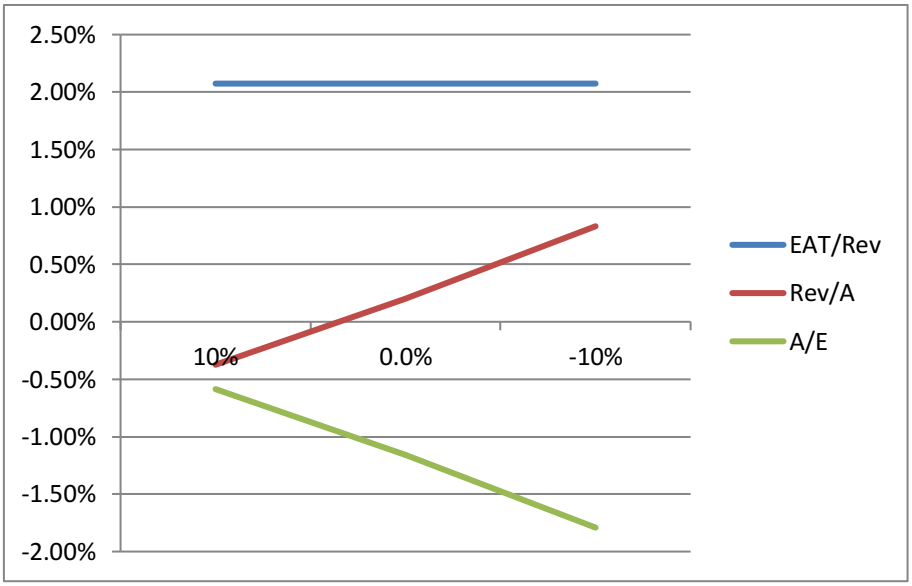
Through chart 4.16, you can see that two ratios are changing as the revenues change. Net profit margin is a reverse change that decreases as the revenues increase. The total assets turnover is positively variable and increases as the revenues increase. But the financial leverage has not changed. And during the change of the revenues, the value of the ROE has not changed. This proves that the basic data of revenues has not an impact on ROE.

Table 4.24 and chart 4.17 shows the influence of the changes of EAT.

Table 4.24 Influence of the changes of asset

Asset change	value	EAT/Rev	Rev/A	A/E	ROE
10%	18029	2.07%	-0.37%	-0.59%	1.11%
0.0%	16390	2.07%	0.20%	-1.16%	1.11%
-10%	14751	2.07%	0.83%	-1.79%	1.11%

Chart 4.17 Influence of the changes of asset



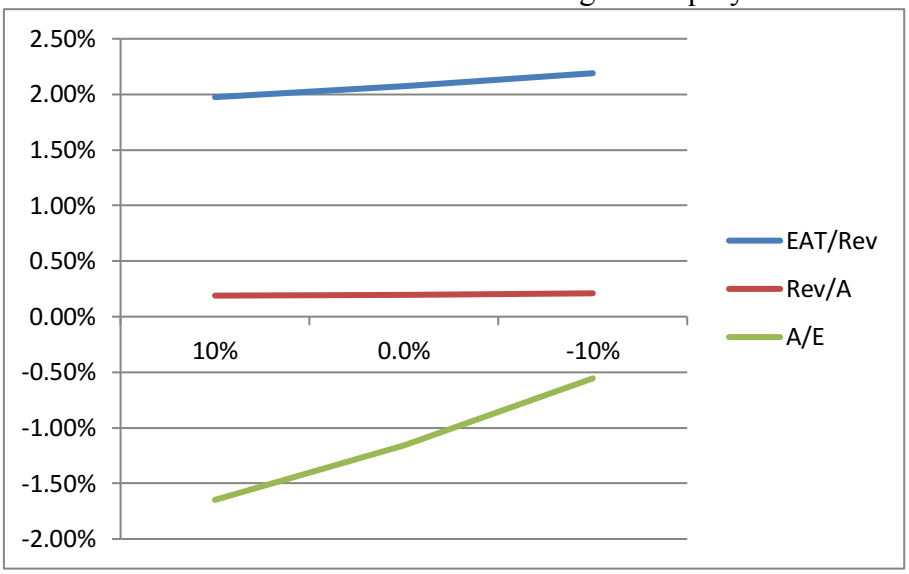
Through chart 4.17, you can see that two ratios are changing as the asset change. The total assets turnover is a reverse change that decreases as the asset increase. The financial leverage is positively variable and increases as the asset increase. But the Net profit margin has not changed. And during the change of the asset, the value of the ROE has not changed. This proves that the basic data of asset has not an impact on ROE.

Table 4.25 and chart 4.18 shows the influence of the changes of equity.

Table 4.25 Influence of the changes of equity

E change	value	EAT/Rev	Rev/A	A/E	ROE
10%	11200.2	1.97%	0.19%	-1.65%	0.52%
0.0%	10182	2.07%	0.20%	-1.16%	1.11%
-10%	9163.8	2.19%	0.21%	-0.56%	1.84%

Chart 4.18 Influence of the changes of equity



Through chart 4.1, you can see that as the ratio changes, there are two ratios that change, that is, financial leverage and net profit margin. Total assets turnover remains basically unchanged. Both the financial leverage and the net profit margin are reversed. As the equity increases, the values of both of the rats are reduced. But the volatility of financial leverage is greater than the net profit margin. And, as the equity increases, the ROE also changes, and the ROE drops. This proves that the basic data of equity has an impact on ROE.

So according to the sensitivity analysis, we know that only EAT and equity have an impact on ROE, and one is positively correlated with ROE and one is negatively correlated.

5 Conclusion

Financial analysis is based on some basic data from financial statement, then calculate some financial indicators which are related to profitability, liquidity, and solvency according to some formulas. Then compare these rats by calculation to analyze the competitiveness of a company in the market. And show the strength of the company to investors or securities companies.

The goal of this thesis is to analyze financial condition of Walton Advanced Engineering Company from 2013 to 2017. After all of the calculations and analysis, we acquired lots of information about Walton Advanced Engineering Company, the efficiency of its normal operation and management and the how well they used its capital, etc. Ultimately, we should be able to make a basic forecast for the entire Walton Advanced Engineering Company and have a comment on the company's decision over the years. Of course, different people have different requirements for decision makers and different preferences for risks, so the conclusions drawn will be different. Most Chinese are typical risk-averse investors, and Walton Advanced Engineering Company is also a Taiwanese company, so when analyzing, it is inevitable to think more about how to reduce the risk of decision-making.

In Chapter 4, no matter what the analysis of the financial ratios is, it is impossible to circumvent the changes in a series of data brought about by the decline in revenues between 2014 and 2015. But as I analyzed in the common-size analysis, there was no significant fluctuation in total assets during the five years. Although there was a small decline in 2015, it is far from being shown in the line chart of the revenues so serious. Between 2013 and 2017, the total assets of the Walton Advanced Engineering Company are on the rise. Looking at the relationship between liability and equity, we can see that during the five years, the debt-to-equity ratio is getting smaller and smaller, which proves that the company has been reducing debts. It is not difficult to conclude that this is the company's strategic contraction. In order to repay

debt, reduce the company's debt ratio and reduce the investment in 2015, it is not losing the market.

It is worth mentioning that observing tax can find that in the past five years, regardless of income, the company's income tax has been stable, almost no fluctuation. At this point, at least the possibility of policy impact on the company's finances is reduced.

In summary, I am optimistic about the decision of Walton Advanced Engineering Company. In fact, in 2014, the company was also heavily invested in production and had a considerable profit, but when the investment was reduced in 2015, the profit was immediately reduced. Then, in 2016 and 2017, it will gradually increase and increase its value. This proves that there is a slight lack of funds in the company, but the market response of the product is very good. And in the decision-making in recent years, it is very suitable for the steady development of this company. So I am optimistic about the future of Walton Advanced Engineering Company.

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Available on: https://bkso.baidu.com/item

List of Abbreviations

A – Asset

E – Equity

ACP - Average collection period

ART - Account receivable turnover

EAT - Earning after taxes

EBIT - Earning before interest and taxes

IT - Inventory turnover

NPM - Net profit margin

OPM - Operating profit margin

Rev - Revenue

ROA - Return on assets

ROE - Return on equity

TAT - Total assets turnover

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List of Annexes

Annex 1 Balance sheet of Walton Advanced Engineering Inc.

Fiscal year is January-December. All values TWD Millions.	2013	2014	2015	2016	2017
Cash & Short Term Investments	1682	2054	2692	2603	2682
Cash Only	1542	1954	2418	2253	2170
Short-Term Investments	140	100	274	350	512
Total Accounts Receivable	1518	1702	932	1322	1286
Accounts Receivables, Net	1493	1568	883	1262	1228
Accounts Receivables, Gross	1502	1577	884	1263	1229
Bad Debt/Doubtful Accounts	-9	-9	-1	-1	-1
Other Receivables	25	134	49	60	58
Inventories	877	775	742	988	944
Finished Goods	250	239	257	405	384
Work in Progress	224	128	132	211	194
Raw Materials	403	408	353	372	366
Other Current Assets	36	41	28	57	32
Total Current Assets	4113	4572	4394	4970	4944
Net Property, Plant & Equipment	11635	10922	10032	9450	9322
Property, Plant & Equipment - Gross	35690	37438	39003	39074	40479
Buildings	3319	3497	4617	4656	4812
Machinery & Equipment	31562	32767	34011	32769	34057
Construction in Progress	545	902	89	1378	1313
Transportation Equipment	18	21	22	25	26
Other Property, Plant & Equipment	246	251	264	246	271
Accumulated Depreciation	24055	26516	28971	29624	31157
Buildings	1706	1863	2046	2237	2161
Machinery & Equipment	22114	24411	26671	27143	28746
Transportation Equipment	16	14	16	18	18
Other Property, Plant & Equipment	219	228	238	226	232
Total Investments and Advances	220	486	573	783	1665
LT Investment - Affiliate Companies	0	150	151	135	129

Other Long-Term Investments	220	336	422	648	1536
Long-Term Note Receivable	130	105	102	97	84
Other Assets	434	620	409	413	375
Deferred Charges	37	29	28	19	18
Tangible Other Assets	397	591	381	394	357
Total Assets	16532	16705	15510	15713	16390
ST Debt & Current Portion LT Debt	1462	1104	1296	2397	1218
Short Term Debt	562	176	652	1025	551
Current Portion of Long Term Debt	900	928	644	1372	667
Accounts Payable	941	1004	873	979	861
Income Tax Payable	37	132	60	68	100
Other Current Liabilities	849	685	653	896	969
Accrued Payroll	272	304	278	394	436
Miscellaneous Current Liabilities	577	381	375	502	533
Total Current Liabilities	3289	2925	2882	4340	3148
Long-Term Debt	6392	5940	4922	3215	2938
Non-Convertible Debt	6392	5912	4894	3187	2938
Convertible Debt	0	28	28	28	0
Provision for Risks & Charges	0	14	47	91	120
Deferred Taxes	-349	-344	-354	-356	-340
Deferred Taxes - Credit	35	30	21	18	2
Deferred Taxes - Debit	384	374	375	374	342
Total Liabilities	9716	8909	7872	7664	6208
Common Stock Par/Carry Value	5007	5007	4830	4828	5264
Additional Paid-In Capital/Capital Surplus	50	50	120	117	340
Retained Earnings	1386	2196	2093	2377	2858
Cumulative Translation Adjustment/Unrealized For. Exch. Gain	32	77	47	-49	-68
Unrealized Gain/Loss Marketable Securities	-215	-108	17	272	1195
Other Appropriated Reserves	588	576	582	599	648
Treasury Stock	-32	-2	-51	-95	-55

Total Equity	6816	7796	7638	8049	10182
Liabilities & Shareholders' Equity	16532	16705	15510	15713	16390

Annex 2 Income statement of Walton Advanced Engineering Inc.

Fiscal year is January-December. All values TWD Millions.	2013	2014	2015	2016	2017
Sales/Revenue	8872	10015	7913	8748	9432
Cost of Goods Sold (COGS) incl. D&A	8224	8667	7378	7817	8102
COGS excluding D&A	5747	6092	4729	5338	5732
Depreciation & Amortization Expense	2477	2575	2649	2479	2370
Depreciation	2461	2560	2649	2479	2359
Amortization of Intangibles	15	0	0	0	11
Amortization of Deferred Charges	1	15	0	0	0
Gross Income	648	1348	535	931	1330
SG&A Expense	321	409	423	458	486
Research & Development	65	69	72	98	100
Other SG&A	256	340	351	360	386
EBIT	327	939	112	473	844
Unusual Expense	-131	3	-19	-30	-22
Non-Operating Income/Expense	117	214	169	106	6
Non-Operating Interest Income	7	11	15	18	18
Interest Expense	108	72	67	50	-48
Gross Interest Expense	125	87	82	58	-31
Interest Capitalized	17	15	15	8	17
EBT	452	1026	194	531	813
Income Tax	130	150	53	87	139
Income Tax - Current Domestic	43	138	61	80	116
Income Tax - Deferred Domestic	87	12	-8	7	23

Equity in Affiliates	0	0	2	-4	-4
Net Income	322	876	143	440	670

Annex 3 Cash flow statement of Walton Advanced Engineering Inc.

Fiscal year is January-December. All values TWD Millions.	2013	2014	2015	2016	2017
Operating Activities					
Net Income before Extraordinaire	452	1026	196	527	810
Depreciation, Depletion & Amortization	2476	2575	2649	2479	2359
Depreciation and Depletion	2461	2560	2649	2479	2359
Amortization of Intangible Assets	15	15	0	0	0
Other Funds	-195	8	-160	-126	-198
Funds from Operations	2733	3609	2685	2880	2971
Changes in Working Capital	-145	103	628	-238	9
Receivables	-279	-128	722	-389	38
Inventories	-6	58	34	-243	45
Accounts Payable	0	63	-131	105	-118
Other Assets/Liabilities	140	110	3	289	44
Net Operating Cash Flow	2588	3712	3313	2642	2980
Investing Activities					
Capital Expenditures	-2224	-2335	-1950	-2008	-2179
Capital Expenditures (Fixed Assets)	-2224	-2335	-1950	-2008	-2178
Capital Expenditures (Other Assets)	0	0	0	0	-1
Sale of Fixed Assets & Businesses	45	13	450	44	46
Purchase/Sale of Investments	56	-177	-135	-24	1
Purchase of Investments	-129	-284	-274	-344	-207
Sale/Maturity of Investments	185	107	139	320	208
Other Uses	-8	-2	-5	-12	0
Other Sources	397	0	0	9	0

Net Investing Cash Flow	-1734	-2501	-1640	-1991	-2132
Financing Activities					
Cash Dividends Paid - Total	0	-63	-175	-101	-118
Change in Capital Stock	-32	30	-195	-46	40
Repurchase of Common & Preferred Stk.	-32	0	-195	-46	0
Sale of Common & Preferred Stock	0	30	0	0	40
Issuance/Reduction of Debt, Net	-62	-819	-826	-624	-843
Change in Current Debt	349	-386	476	373	-474
Change in Long-Term Debt	-411	-433	-1302	-997	-369
Issuance of Long-Term Debt	8885	2175	5750	400	500
Reduction in Long-Term Debt	-9296	-2608	-7052	-1397	-869
Net Financing Cash Flow	-94	-852	-1196	-771	-921
Exchange Rate Effect	21	15	-12	-44	-7
Net Change in Cash	781	374	465	-164	-80